

Name: _____

This review is NOT comprehensive. Make sure to study your notes and homework assignments as well!

1) Solve: $y^{\frac{2}{3}} = 64$

A) ± 512

B) ± 16

C) 16

D) 512

2) Solve: $(w+1)^{\frac{3}{2}} = 64$

A) 511

B) 17

C) 15

D) 21

3) Solve: $3y^{\frac{1}{3}} - 2 = 4$

4) Which of the following sets represents a function?

A) $\{(-2,5), (4,1), (5,1), (0,-2)\}$

C) $\{(x,y) \mid x+2=y^2\}$

B) $\{(-4,1), (6,2), (-4,3), (5,2)\}$

D) the set of real numbers

5) Which one of the following sets is *not* a function?

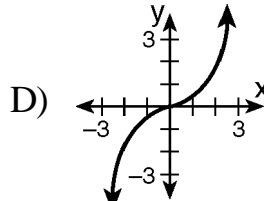
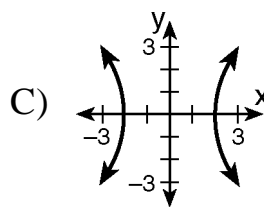
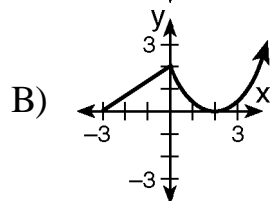
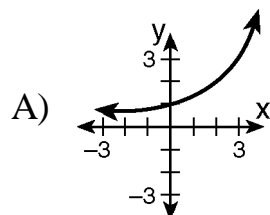
A) $\{(1,2), (2,3), (3,4)\}$

C) $\{(1,1), (2,1), (3,1)\}$

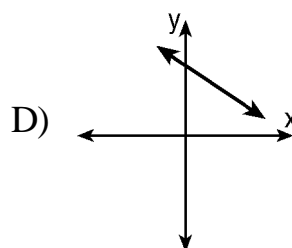
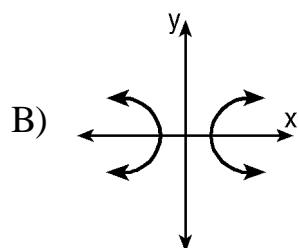
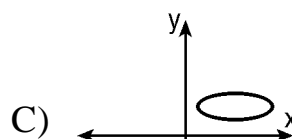
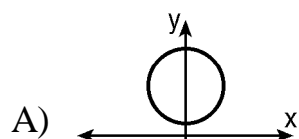
B) $\{(1,1), (1,2), (1,3)\}$

D) $\{(1,1), (2,2), (3,3)\}$

6) Which graph does *not* represent a function?



7) Which graph of a relation is also a function?



8) How many of the following relations are functions?

- $y = 5x - 3$
- $y = \sqrt{x + 5}$
- $y = \frac{1}{x - 2} + 7$
- $y = -2^x - 1$

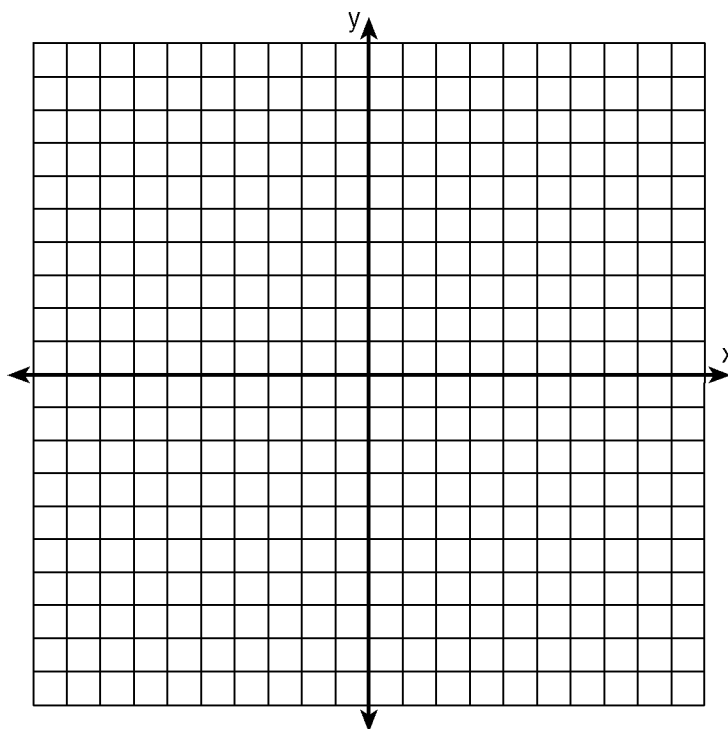
A) 1

B) 2

C) 3

D) 4

9) On the axes provided below, sketch a graph of a relation that is *not* a function.



10) Write a definition for the term "*function*" and give an example.

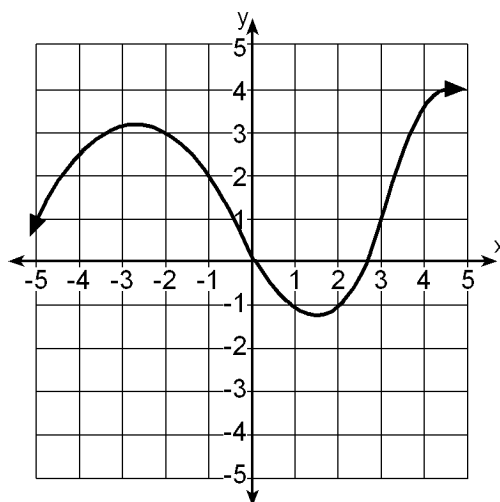
11) If $f(x) = 4x^0 + (4x)^{-1}$, what is the value of $f(4)$?

- A) $4\frac{1}{16}$ B) 0 C) -12 D) $1\frac{1}{16}$

12) If $f(x) = 3^x$, what is the value of $f(-2)$?

- A) -6 B) $\frac{1}{9}$ C) -9 D) 9

13) Given the graph below of $y = f(x)$.



According to the graph shown, what is the value of $f(1)$?

- A) 1 B) 2 C) -1 D) -2

14) Given the function $f(x) = 3x^2 - 4$, which of the following is true?

- A) $f(0) = 0$ C) $f(-2) = f(2)$
 B) $f(5) + f(2) = f(7)$ D) $f(5) \cdot f(2) = f(10)$

15) Given the function $f(x) = 2x + 5$, find the value of $f(a + 1)$.

16) For the given function, find the following values:

(a) $f(-2)$

(b) $f(0)$

(c) $f(\frac{1}{2})$

(d) $f(5)$

(e) $f(a)$

(f) $f(\frac{1}{x})$

(g) $f(-x)$

$$f(x) = (x - 3)^2$$